21. (new) The method of claim 18, wherein the loss of cellular ATP arises from an ischaemic-reperfusion event.

22. (new) The method of claim 21, wherein the ischaemic-reperfusion event is a myocardial infarct, surgery, or stroke.

23. (new) The method of claim 22, wherein the surgery is open heart surgery, organ transplantation surgery or heart or lung bypass surgery.

24. (new) The method of claim 21, wherein the ischaemic-reperfusion event results in apoptosis.

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25. (amended) The method of claim 18, comprising administering a prophylactically or therapeutically effective amount of the inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose to a subject with or at risk of an ischaemic-reperfusion injury.

No New Matter

The above amendments to the claims introduce no new matter. Support for compositions comprising inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose is provided throughout the specification and claims, e.g., claim 1, as originally filed.

REMARKS

Claims 1-25 are pending. Claims 1-25 are subject to a restriction requirement. Applicants provisionally elect Group I with traverse.

CLAIMS 1-25 AS AMENDED SHARE A NOVEL TECHNICAL FEATURE

Claims 1-25 were restricted into four groups on the grounds that the claimed subject matter did not relate to a single general inventive concept under PCT Rule 13.1, because the claims allegedly lacked a common novel technical feature under PCT Rule 13.2. Applicants traverse.

Under 37 CRF 1.475(a), "unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or

corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. MPEP §1875.01

As amended, each of the claims in Groups I through IV (i.e., claims 1-25) relates to a composition comprising "inositolphosphoglycan or an IPG synthetic analogue and ribose" or to uses of a composition comprising "inositolphosphoglycan or an IPG synthetic analogue and ribose." The products of Group I (claims 1-7) and the processes of using the product of Groups II, III and IV (claims 8-14, claims 15-17, and claims 18-25, respectively) share the special technical feature of a composition including inositolphosphoglycan or an IPG synthetic analogue and ribose, which is deemed to be a novel contribution to the art.

According to 37 CFR 1.475(b), "a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to ... (2) a product and a process of use of said product." MPEP §1875.01.

Claims 1-7 (Group I) relate to "a composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose." Claims 8-14, 15-17 and 18-25 each relates to a process for using the composition recited in claim 1, i.e., a composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose. Thus, each of the claims relates to the same inventive concept, and the restriction of the claims into Groups I-IV for the purpose of examination should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-25 satisfy unity of invention under PCT Rule 13.1, and that the restriction requirement under 35 U.S.C §121 and §372 should be withdrawn. Nonetheless, in order to be fully responsive, Applicants provisionally elect Group I with traverse. If the Examiner believes a telephonic interview would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (510) 337-7871.

Respectfully submitted,

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Marked Copy of the Amended Claims for
USSN 09/719,909

1. (as filed) A composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose.

2. (as filed) The composition of claim 1 wherein the IPG is a P-type IPG.

3. (as filed) The composition of claim 1 wherein the synthetic analogue is a P-type IPG synthetic analogue.

4. (amended) The composition of claim 1, further comprising adenosine or purine, or a nucleotide precursor thereof.

5. (twice amended) The composition of claim 1 or 2, wherein the composition is a liquid composition.

6. (twice amended) The composition of claim 1 or 2, wherein the composition is a powder or concentrate from which a liquid composition can be prepared.

7. (amended) The composition of claim 1 or 2, further comprising a pharmaceutically acceptable excipient.

8. (twice amended) A method of preparing a medicament for the treatment or prevention of an ischaemic-reperfusion injury, the method comprising:

providing an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose in a pharmaceutically acceptable excipient.

9. (amended) The method of claim 8, wherein the IPG is a P-type IPG.

10. (amended) The method of claim 8, wherein the synthetic analogue is a P-type IPG synthetic analogue.

11. (twice amended) The method of claim 8, wherein the ischaemic-reperfusion injury arises from myocardial infarct, surgery or stroke.

12. (twice amended) The method of claim 11, wherein the surgery is open heart surgery, organ transplantation surgery, or heart or lung bypass surgery.

13. (twice amended) The method of claim 8, wherein the ischaemic-reperfusion injury results in apoptosis.

14. (thrice amended) The method of claim 8, wherein the medicament further comprises one or more of:

(a) adenosine or purine or a precursor thereof;

(b) ~~ribose;~~

~~(c)~~ nicotinamide or derivatives thereof;

~~(d)~~(c) a Ca^{2+} ion uptake inhibitor;

~~(e)~~(d) a cardioplegic solution;

~~(f)~~(e) means to maintain the glutathione system, such as glutathione peroxidase and the reduced form of glutathione (GSH); and,

~~(g)~~(f) an endothelin inhibitor.

15. (as filed) An in vitro method for preserving an organ for transplantation, the method comprising contacting the organ with a composition of claim 1.

16. (as filed) The method of claim 15 wherein the composition is perfused through the organ.

17. (as filed) The method of claim 15 wherein the organ is stored in the composition prior to transplantation.

18. (amended) A method of reducing loss of cellular ATP, the method comprising:

administering a composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose to a cell in a dose sufficient to prevent or reduce the loss of cellular ATP.

19. (new) The method of claim 18, wherein the IPG is a P-type IPG.

20. (new) The method of claim 18, wherein the synthetic analogue is a P-type IPG synthetic analogue.

21. (new) The method of claim 18, wherein the loss of cellular ATP arises from an ischaemic-reperfusion event.

22. (new) The method of claim 21, wherein the ischaemic-reperfusion event is a myocardial infarct, surgery, or stroke.

23. (new) The method of claim 22, wherein the surgery is open heart surgery, organ transplantation surgery or heart or lung bypass surgery.

24. (new) The method of claim 21, wherein the ischaemic-reperfusion event results in apoptosis.

25. (amended) The method of claim 18, comprising administering a prophylactically or therapeutically effective amount of the inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose to a subject with or at risk of an ischaemic-reperfusion injury.

Courtesy Copy of the Claims as Amended for
USSN 09/719,909

1. (as filed) A composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose.

2. (as filed) The composition of claim 1 wherein the IPG is a P-type IPG.

3. (as filed) The composition of claim 1 wherein the synthetic analogue is a P-type IPG synthetic analogue.

4. (amended) The composition of claim 1, further comprising adenosine or purine, or a nucleotide precursor thereof.

5. (twice amended) The composition of claim 1 or 2, wherein the composition is a liquid composition.

6. (twice amended) The composition of claim 1 or 2, wherein the composition is a powder or concentrate from which a liquid composition can be prepared.

7. (amended) The composition of claim 1 or 2, further comprising a pharmaceutically acceptable excipient.

8. (twice amended) A method of preparing a medicament for the treatment or prevention of an ischaemic-reperfusion injury, the method comprising:

providing an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose in a pharmaceutically acceptable excipient.

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10. (amended) The method of claim 8, wherein the synthetic analogue is a P-type IPG synthetic analogue.

11. (twice amended) The method of claim 8, wherein the ischaemic-reperfusion injury arises from myocardial infarct, surgery or stroke.

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14. (thrice amended) The method of claim 8, wherein the medicament further comprises one or more of:

(a) adenosine or purine or a precursor thereof;

(b) nicotinamide or derivatives thereof;

(c) a Ca^{2+} ion uptake inhibitor;

(d) a cardioplegic solution;

(e) means to maintain the glutathione system, such as glutathione peroxidase and the reduced form of glutathione (GSH); and,

(f) an endothelin inhibitor.

15. (as filed) An in vitro method for preserving an organ for transplantation, the method comprising contacting the organ with a composition of claim 1.

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17. (as filed) The method of claim 15 wherein the organ is stored in the composition prior to transplantation.

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administering a composition comprising an inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose to a cell in a dose sufficient to prevent or reduce the loss of cellular ATP.

19. (new) The method of claim 18, wherein the IPG is a P-type IPG.

20. (new) The method of claim 18, wherein the synthetic analogue is a P-type IPG synthetic analogue.

21. (new) The method of claim 18, wherein the loss of cellular ATP arises from an ischaemic-reperfusion event.

22. (new) The method of claim 21, wherein the ischaemic-reperfusion event is a myocardial infarct, surgery, or stroke.

23. (new) The method of claim 22, wherein the surgery is open heart surgery, organ transplantation surgery or heart or lung bypass surgery.

24. (new) The method of claim 21, wherein the ischaemic-reperfusion event results in apoptosis.

25. (amended) The method of claim 18, comprising administering a prophylactically or therapeutically effective amount of the inositolphosphoglycan (IPG) or an IPG synthetic analogue and ribose to a subject with or at risk of an ischaemic-reperfusion injury.